

REMARKS

Applicants thank Examiner Wong for her courteous and congenial telephone interview with the Applicants' representative on November 14, 2005.

Claims 1-11, 13-16 and 18-21 are pending in the present application.

Claims 12 and 17 are canceled with this Amendment.

Claims 1, 5, 6 and 13 are amended to more particularly point out and clearly define the invention.

Claims 18-21 are new.

Claims 1 and 13 are amended to recite that the substrate is electrolytically treated at a constant current density and an increasing voltage. Support in the specification is at page 5, line 22 to page 6, line 8. Also the claims are amended to change the terms "treating" to the term "polishing" and "treated" to "polished". Support in the specification for the term "polishing" and "polished" is at page 5, lines 22-23 and the figure.

Claims 5 and 6 are amended to correct typographical errors.

Support in the specification for new claims 18-20 is at page 6, lines 4-8.

Support in the specification for new claim 21 is at page 4, lines 15-16.

The specification is objected to because of a few informalities. The specification has been amended at page 2, line 19 to change "*mechanism*" to "*Mechanism*", at page 4, line 8 to change "form" to "from", at page 7, line 8 to delete the extraneous comma, and at page 8, line 27 to change the period to a comma.

Applicants respectfully request withdrawal of the objection of the specification.

Claim 5 is objected to under 37 C.F.R. §1.75(c) as being of improper dependent form.

Applicants have amended claim 5 to change its dependency to claim 4.

Applicants respectfully request withdrawal of the objection of claim 5 under 37 C.F.C. §1.75(c).

Claims 4, 5 and 17 are rejected under 35 U.S.C. §112, second paragraph.

Applicants have amended claim 4 to recite "an electronic device substrate".

Claim 17 is canceled. Accordingly, the rejection with respect to this claim is moot.

Claims 1-9 and 12 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over JP 11-117100 in combination with U.S. 6,508,927 to Yanada et al. Applicants respectfully traverse this rejection

Claim 12 is canceled. Accordingly, the rejection with respect to this claim is moot.

JP 11-117100 alone or in combination with Yanada et al. does not teach or suggest a method of electroplating a layer of tin or tin-alloy on a substrate, comprising: electrolytically polishing a substrate at a constant current density and an increasing voltage with a solution comprising a phosphoric acid and a carboxylic acid; and electroplating a layer of tin or tin-alloy on a surface of the polished substrate (claim 1). Neither document teaches or suggests electrolytically polishing a substrate at a constant current density and an increasing voltage. Neither document alone or in combination provides any reason or motivation for performing such a method. Both are completely silent on such a method.

Since claims 2-9 depend directly or indirectly from claim 1, they are patentable over the applied documents for the same reasons as claim 1.

Applicants respectfully request withdrawal of the rejection of claims 1-9 under 35 U.S.C. §103(a) as allegedly unpatentable over JP 11-117100 in combination with U.S. 6,508,927 to Yanada et al.

Claims 10 and 11 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over JP 11-117100 in combination with U.S. 6,508,927 to Yanada et al. as applied to claims 1-9 above, and further in view of “Characterization of Electroplating Baths with Electrochemical Methods”, *Galvanotechnik*, Vol. 86, No. 2 (1995), pp. 376-82 to Baumgaertner et al. Applicants respectfully traverse this rejection.

Claims 10 and 11 depend directly or indirectly from claim 1. Claim 1 is patentable over JP 11-117100 and Yanada et al. for the reasons discussed above. Baumgaertner et al. do not make up for the deficiencies of either JP 11-117100 or Yanada et al. Baumgaertner et al. also do not teach or suggest electrolytically polishing a substrate at a constant current density and an increasing voltage as recited in present claim 1. No where do Baumgaertner et al. provide any reason or motivation for such a method.

Applicants respectfully request withdrawal of the rejection of claims 10 and 11 under 35 U.S.C. §103(a) over JP 11-117100 and U.S. 6,508,927 to Yanada et al. and further in view of Baumgaertner et al.

Claims 13-17 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable over JP 11-117100 in combination with U.S. 6,508,927 to Yanada et al. Applicants respectfully traverse this rejection.

Claim 17 is canceled. Accordingly, the rejection with respect to this claim is moot.

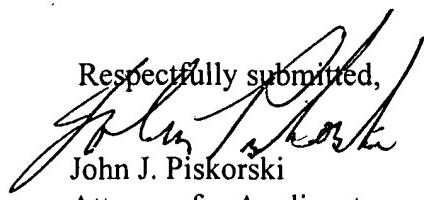
Neither JP 11-117100 alone or in combination with Yanada et al. teaches or suggests a method of electroplating a layer of tin or tin-alloy on a substrate, comprising: electrolytically polishing a substrate at a constant current density and an increasing voltage with a solution comprising a phosphoric acid and a carboxylic acid; and electroplating a layer of tin or tin-alloy on a surface of the polished substrate as recited in present claim 13. Neither document alone or in combination provides any reason or motivation to electrolytically polish a substrate at a constant current density and an increasing voltage as recited in claim 13. Both documents are silent on such a method.

Since claims 14-16 depend directly from claim 13, they also are patentable over JP 11-117100 and Yanada et al.

Applicants respectfully request withdrawal of the rejection of claims 13-16 under 35 U.S.C. §103(a) as allegedly unpatentable over JP 11-117100 in combination with U.S. 6,508,927 to Yanada et al.

Favorable consideration and allowance to claims 1-11, 13-16 and 18-21 are earnestly solicited.

Should the Examiner have any questions concerning this response or this application, or should she believe this application is for any reason not yet in condition for allowance, she is respectfully requested to telephone the undersigned at the number set forth below in order to expedite the allowance of this application.


Respectfully submitted,

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